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MEMORANDUM FOR: Director of Central Intelligence

SUBJECT: D/NRO Memoranda relating to SR-71/OXCART

REFERENCE: (a) D/NRO Memo "SR-71/A-12 Comparison", dated 23 September 1967, [redacted] 25X1

(b) D/NRO Memo "SR-71 Category III Tests", dated 25 September 1967, [redacted] 25X1

1. This memorandum is for your information only.

2. Referenced memoranda, copies attached, were received from the D/NRO, 25 September. These reports were sent to ExCom members as a result of a requirement for them levied on the D/NRO at the last ExCom meeting.

3. Though a detailed analysis has not yet been made of reference (a), "SR-71/A-12 Comparison", the following comments or observations are noted:

a. The basic capabilities of SR-71/A-12 aircraft are treated reasonably fairly with a 2,000-5,000 feet higher altitude advantage acknowledged for the OXCART A-12 aircraft. Also whereas the A-12 flies at Mach 3.1, the SR-71's current operational limitation is Mach 3.0 due to tank sealant problems.

b. The Narrative Comments about sensors state that photographic sensors are the primary sensors applicable to the problem of surveillance of North Vietnam for surface-to-surface missiles. Further, that both SR-71 and A-12 sensor systems are adequate for this task. One surprise to us, noted in the memorandum, indicates

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c. Though attention is not specifically drawn to the following: a comparison of photographic sensor capabilities indicates that the A-12 camera, with a 63 n.m. width, provides about twice the coverage of the combined SR-71 photographic sensors. As a result about two missions would be required to acquire generally the same area ground coverage as a single A-12 mission, but with somewhat lower SR-71 camera resolutions than provided by the single A-12 high resolution camera. 25X1

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4. Regarding reference (b), current status of SR-71 Category III tests:

a. The D/NRO forwarded four summary pages of SAC data and SAC analysis without any D/NRO assessment or significant comment about the information. In view of the sparse nature of the information, it is hoped that additional amplifying data will be forthcoming at the next ExCom meeting. The D/NRO notes that SAC will publish a final report on SR-71 Category III tests within sixty days after completion of the test program.

b. A cursory examination of data indicates that SAC has flown at Mach 3.0, in an eleven week period of Category III flight test, forty-five two-leg sorties, with fifteen aborts; twenty 2 1/2-leg sorties with five aborts; six three-leg sorties with one abort; and eleven four-leg sorties with four aborts. In view of no significant amplifying information available, it is difficult to assess this effort. However, of the 82 SR-71 flights, 25 of them resulted in aborts, for an airborne reliability of 70%. By extrapolation of data, SAC postulates 85% effectiveness numbers.

The Category III test summary, while offering interesting numbers, is not complete enough in detail to afford a basis for proper judgment as to the reliability of the SR-71 system. Data is provided regarding numbers of sorties flown with two, three and four Mach 3.0 legs but is not presented in such a manner as to make determination of specific results possible. Of significant note, however, is that in the 11th week of the test, eight sorties scheduled for four Mach 3.0 legs became airborne and four air-aborted, a 50% effectiveness percentile. Germane to this effectiveness is that a minimum of four high speed legs are required for Mach 3.0 non-stop deployment to Kadena Air Base.

c. To properly assess the Category III test results, exact detail regarding the following items during the test would be required:

The report lists only results of airborne sorties. Necessary would be a complete documentation of the number of sorties scheduled versus airborne and the number of airborne sorties successful as scheduled (to include individual system success).

d. Reports on SR-71 sensor performance would seem to indicate that equipment operation was quite good on sorties reported (about 1/3 of all sorties flown.) but that resolution was down from previously advertised numbers. Average resolutions of primary camera systems reported:

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The report on the numbers of sensors successful does not indicate that sensors were flown on each sortie, or that any of the

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listed sorties was flown in the total weapons system configuration planned for North Vietnam and the individual systems success on the sortie.

5. To provide you detailed analysis of the SR-71 systems reliability, a greatly more detailed report of the testing and the control criteria would necessarily have to be made available to this Office for review.

CARL E. DUCKETT
Deputy Director
for
Science and Technology

Attachments:
As Noted

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SIGNATURE RECOMMENDED:

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Acting Director of Special Activities

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